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BIG FIELD TEST PLANNED FOR ELECTRICAL GUIDING OF YOUNG SALMON

A full-scale field experiment on the effectiveness of electrical apparatus in guiding young seabound salmon away from danger areas will begin late in March and continue throughout the period of migration, Assistant Secretary of the Interior Ross Leffler announced today. The test will be made at Lake Taps on the White River, a tributary to Puget Sound in the State of Washington.

The project will be one of the highlights of the electrical guiding experimental program which the Bureau of Commercial Fisheries, of the Department's Fish and Wildlife Service has been conducting for about seven years. It is the Bureau's first large-scale test on the use of electrical equipment to divert young fish from danger areas.

Two field tests on streams approximating 100 feet in width have been successful, as have numerous laboratory and aquarium tests. In the pending test a 1,000-foot electrical fence will be used. A "fence" consists of a line of electrodes which hang in the water at specified intervals and which carry pulsating direct electric current supplied by a source on the shore.

As the small fish approach the electrical field they are guided into a trap for enumeration. An additional trap will be used to catch any fish which may get through the electrical field. In this way the actual effectiveness of the device under normal field conditions can be ascertained.

The electrical guiding experiments have been conducted to get solutions for four general types of problems relating to fish migrations:

Guiding adult fish around barriers which block upstream migration;

Guiding young fish safely around danger spots on their downstream migration;

Separating wanted from unwanted fish;

Protecting young fish from predators.

The value of electrical apparatus in guiding adult salmon and steelhead trout upstream passed a major test some months ago at Brownlee Dam on the Snake River. During a full scale test more than 15,000 fish bound for their spawning grounds were led into traps and transported to waters above the construction area.

Considerable success has been achieved in separating food fish from the sea lamprey in the Great Lakes area. The food fish reacted to the properly pulsed current and were led into safety but adult lamprey on their way to spawn went right through it and plunged into another electrical field of sufficient strength to kill practically every lamprey entering it.

The chief problem area for predation is in the lower Columbia River where hordes of squawfish are a final hazard for young salmon planted from hatcheries. Some progress has been made here but there is still much to be accomplished before this problem can be considered solved.

The Fish and Wildlife Service has recently issued a report on the use of electrical equipment in guiding adult salmon. This illustrated report is entitled Special Scientific Report--Fisheries No. 246, Diversion of Admlt Salmon by anElectrical Field. A limited supply is available through the United States Fish and Wildlife Service, Department of the Interior, Washington 25, D. C.

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